



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,063	03/13/2002	Frederick Pearson	BKR-25102/01	8520
25006	7590	04/21/2004	EXAMINER	
GIFFORD, KRASS, GROH, SPRINKLE ANDERSON & CITKOWSKI, PC 280 N OLD WOODARD AVE SUITE 400 BIRMINGHAM, MI 48009			RINEHART, KENNETH	
			ART UNIT	PAPER NUMBER
			3749	
DATE MAILED: 04/21/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/088,063	PEARSON, FREDERICK 
	Examiner	Art Unit
	Kenneth B Rinehart	3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 13 March 2002.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20,22-34 and 36 is/are rejected.
- 7) Claim(s) 21 and 35 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 March 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date: _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>8212002</u>	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: the claim contains a numbering scheme of i and vs which should be corrected. Appropriate correction is required.

Claims 30 and 31 are objected to because of the following informalities: Claims 30 and 31 repeat the same limitations. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2, 4, 6, 8, 9-12, 14, 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "step ii" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "step ii" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "step iii" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the solids products of step v" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation " the solids products of step v " in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the said solids products" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "step iii" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "step iii" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation "step iii" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 27 depends upon itself, which render the claim indefinite. In order to facilitate prosecution the examiner will assume the claim depends upon itself.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1, 3, 6, 8-12, 17, 18, 20, 22, 23, 24, 27, 29, 30, 31, 36 is rejected under 35 U.S.C. 102(e) as being anticipated by Tang. Tang shows introducing the material into a chamber having closure means (12, fig. 1), extracting or displacing oxygen from the chamber so as to provide a substantially oxygen-depleted atmosphere (col. 2, lines 34-35), effecting a preliminary treatment of the material by irradiating with electromagnetic radiation of sufficient power and for a sufficient period to cause substantial degradation of the carbonaceous material to an ash like

residue (col. 2, lines 62-67, col. 3, lines 1-4), introducing oxygen and air and at least one combustible gas into the said chamber (col. 3, lines 4-8, col. 3, lines 14-16)), and igniting said at least one combustible gas whereby to cause combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, recirculated gas is combustible), ignition of the said at least one combustible gas is initiated by further irradiation with electromagnetic radiation (col. 3, lines 4-12, 36, fig. 1), step iii) is performed by irradiating the material with microwave radiation (col. 2, lines 59-67), cooling the solid products of step v (col. 3, lines 27), collecting the solids products of step v (44, fig. 1), delivering the said collected products to a delivery point (col. 3, lines 43-45), preheating eh said material before step iii (col. 2, lines 39-41), the gaseous products of steps iii) and or v) are trapped by chemical reaction or physical transformation (24, fig. 1), a housing defining at least one chamber and having an opening for introducing the material into the said at least one chamber together with closure means for closing the said at least one chamber (2, 12, fig. 1), the housing also comprising means for extracting or displacing oxygen from the said at least one chamber so as to provide a substantially oxygen-depleted atmosphere in the said at least one chamber (14, fig. 1), means for irradiating the material in the said at least one chamber with electromagnetic radiation of sufficient power and for a sufficient time so as to cause degradation of the said material to a residue (fig. 2), means for admitting oxygen or air and at least one combustible gas into the presence of said residue (col. 2, lines 52-55), and means for ignition of the said combustible gas within the said at least one chamber so as to cause substantial combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, col. 3, lines 4-12), which said means for ignition of said at least one combustible gas comprises irradiation with electromagnetic radiation (col. 3, lines 4-12), means for cooling the

solid products of the said combustion (col. 3, line 27), means for collection of the said products of combustion (44, fig. 1), means for delivery of said products to a delivery point (col. 3, lines 43-45, col. 1, line 13, col. 1, lines 56-60), means for preheating the said carbonaceous material (col. 2, lines 39-41), which the irradiating means comprise a single transducer or array of transducers whereby electromagnetic radiation is selectively directed into said at least one chamber (col. 2, lines 35-41), adapted for the cremation of bodily remains (This limitation is functional in nature and is given no patentable weight), the said opening allows introduction of said bodily remains within a coffin, and in which there are provided means for effecting at least partial opening of the said coffin (The coffin would act as a pressure vessel so that, during the processing with the electromagnetic radiation, the coffin would rupture), said means for effecting the said at least partial opening of the coffin comprise or include mechanical means (6, 2, fig. 1, fig. 2) said means for effecting the said at least partial opening of the coffin comprise or include means for heating the said coffin and body (6, fig. 1, fig. 2), means for trapping the gaseous products of combustion (24, 48, fig. 1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tang in view of Gardner. Tang discloses a housing defining at least one chamber and having an opening for introducing the material into the said at least one chamber together with closure means for

Art Unit: 3749

closing the said at least one chamber (2, 12, fig. 1), the housing also comprising means for extracting or displacing oxygen from the said at least one chamber so as to provide a substantially oxygen-depleted atmosphere in the said at least one chamber (14, fig. 1), means for irradiating the material in the said at least one chamber with electromagnetic radiation of sufficient power and for a sufficient time so as to cause degradation of the said material to a residue (fig. 2), means for admitting oxygen or air and at least one combustible gas into the presence of said residue (col. 2, lines 52-55), and means for ignition of the said combustible gas within the said at least one chamber so as to cause substantial combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, col. 3, lines 4-12), adapted for the cremation of bodily remains (This limitation is functional in nature and is given no patentable weight). Tang discloses applicant's invention substantially as claimed with the exception of means for storage of said human body and/or said coffin. Gardner teaches means for storage of said human body and/or said coffin for the purpose of facilitating operation of the apparatus. It would have been obvious to one of ordinary skill in the art to modify Tang by including means for storage of said human body and/or said coffin as taught by Garner for the purpose of facilitating operation of the apparatus so that a more continuous process can occur which will provide an efficient utilization of the apparatus and of the invested capital in said apparatus.

Claim 33, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang in view of Bak. Tang discloses a housing defining at least one chamber and having an opening for introducing the material into the said at least one chamber together with closure means for closing the said at least one chamber (2, 12, fig. 1), the housing also comprising means for extracting or displacing oxygen from the said at least one chamber so as to provide a

Art Unit: 3749

substantially oxygen-depleted atmosphere in the said at least one chamber (14, fig. 1), means for irradiating the material in the said at least one chamber with electromagnetic radiation of sufficient power and for a sufficient time so as to cause degradation of the said material to a residue (fig. 2), means for admitting oxygen or air and at least one combustible gas into the presence of said residue (col. 2, lines 52-55), and means for ignition of the said combustible gas within the said at least one chamber so as to cause substantial combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, col. 3, lines 4-12), adapted for the cremation of bodily remains (This limitation is functional in nature and is given no patentable weight). Tang discloses applicant's invention substantially as claimed with the exception of means for storage of said human body and/or said coffin, said storage means comprises refrigeration means. Bak teaches means for storage of said human body and/or said coffin, said storage means comprises refrigeration means for the purpose of preserving the body prior to cremation. It would have been obvious to one of ordinary skill in the art to modify Tang by including means for storage of said human body and/or said coffin, said storage means comprises refrigeration means as taught by Bak for the purpose of preserving the body prior to cremation for viewing purposes and improving operating condition for funeral workers.

Claims 2, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang in view of Dowson (GB2032596). Tang discloses introducing the material into a chamber having closure means (12, fig. 1), extracting or displacing oxygen from the chamber so as to provide a substantially oxygen-depleted atmosphere (col. 2, lines 34-35), effecting a preliminary treatment of the material by irradiating with electromagnetic radiation of sufficient power and for a sufficient period to cause substantial degradation of the carbonaceous material to an ash like

residue (col. 2, lines 62-67, col. 3, lines 1-4), introducing oxygen and air and at least one combustible gas into the said chamber (col. 3, lines 4-8, col. 3, lines 14-16)), and igniting said at least one combustible gas whereby to cause combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, recirculated gas is combustible), ignition of the said at least one combustible gas is initiated by further irradiation with electromagnetic radiation (col. 3, lines 4-12, 36, fig. 1), and performing thereon the process of Claim 1 (see claim 1), in which prior to step iii) there is effected a partial opening of the coffin, the said partial opening is effected by mechanical means (The coffin would act as a pressure vessel so that, during the processing with the electromagnetic radiation, the coffin would rupture. (6, 2, fig. 1, fig. 2)). Tang discloses applicant's invention substantially as claimed with the exception of in which prior to step iii) there is effected a partial opening of the coffin, the said partial opening is effected by mechanical means, step v) is performed by removing the residue resulting from step ii) from the said chamber to a second chamber, equipped with means for introducing oxygen or air and the said at least one combustible gas. Dowson teaches of the introduction of a body within a coffin into a chamber having closure means (fig. 1), step v) is performed by removing the residue resulting from step ii) from the said chamber to a second chamber, equipped with means for introducing oxygen or air and the said at least one combustible gas (fig. 1) for the purpose of reducing cremation time. It would have been obvious to one of ordinary skill in the art to modify Tang by including the introduction of a body within a coffin into a chamber having closure means, step v) is performed by removing the residue resulting from step ii) from the said chamber to a second chamber, equipped with means for introducing oxygen or air and the said at

Art Unit: 3749

least one combustible gas as taught by Dowson for the purpose of reducing cremation time so that cremator throughput is increased.

Claims 4-5, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang in view of Fowler. Tang discloses introducing the material into a chamber having closure means (12, fig. 1), extracting or displacing oxygen from the chamber so as to provide a substantially oxygen-depleted atmosphere (col. 2, lines 34-35), effecting a preliminary treatment of the material by irradiating with electromagnetic radiation of sufficient power and for a sufficient period to cause substantial degradation of the carbonaceous material to an ash like residue (col. 2, lines 62-67, col. 3, lines 1-4), introducing oxygen and air and at least one combustible gas into the said chamber (col. 3, lines 4-8, col. 3, lines 14-16)), and igniting said at least one combustible gas whereby to cause combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, recirculated gas is combustible), discloses a housing defining at least one chamber and having an opening for introducing the material into the said at least one chamber together with closure means for closing the said at least one chamber (2, 12, fig. 1), the housing also comprising means for extracting or displacing oxygen from the said at least one chamber so as to provide a substantially oxygen-depleted atmosphere in the said at least one chamber (14, fig. 1), means for irradiating the material in the said at least one chamber with electromagnetic radiation of sufficient power and for a sufficient time so as to cause degradation of the said material to a residue (fig. 2), means for admitting oxygen or air and at least one combustible gas into the presence of said residue (col. 2, lines 52-55), and means for ignition of the said combustible gas within the said at least one chamber so as to cause substantial combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, col. 3, lines

4-12). Tang discloses applicant's invention substantially as claimed with the exception of step ii) is performed by introducing an inert gas or oxygen depleted air into the said at least one chamber whereby substantially to fill the said at least one chamber, the said inert gas is nitrogen, the said means for extracting or displacing oxygen from said at least one chamber comprise means for introducing a substantially inert gas or oxygen depleted air whereby to substantially fill the said at least one chamber. Fowler teaches step ii) is performed by introducing an inert gas or oxygen depleted air into the said at least one chamber whereby substantially to fill the said at least one chamber, the said inert gas is nitrogen (abstract) the said means for extracting or displacing oxygen from said at least one chamber comprise means for introducing a substantially inert gas or oxygen depleted air whereby to substantially fill the said at least one chamber (abstract) for the purpose of reducing the quantity of exhaust gases. It would have been obvious to one of ordinary skill in the art to modify Tang by including teaches step ii) is performed by introducing an inert gas or oxygen depleted air into the said at least one chamber whereby substantially to fill the said at least one chamber, the said means for extracting or displacing oxygen from said at least one chamber comprise means for introducing a substantially inert gas or oxygen depleted air whereby to substantially fill the said at least one chamber, said inert gas is nitrogen as taught by Dowson for the purpose of reducing the quantity of exhaust gases and thus reducing the amount of gases to be remediated in order to meet clean air regulations.

Claims 7, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang in view of Morhard et al. Tang discloses introducing the material into a chamber having closure means (12, fig. 1), extracting or displacing oxygen from the chamber so as to provide a substantially oxygen-depleted atmosphere (col. 2, lines 34-35), effecting a preliminary treatment

of the material by irradiating with electromagnetic radiation of sufficient power and for a sufficient period to cause substantial degradation of the carbonaceous material to an ash like residue (col. 2, lines 62-67, col. 3, lines 1-4), introducing oxygen and air and at least one combustible gas into the said chamber (col. 3, lines 4-8, col. 3, lines 14-16)), and igniting said at least one combustible gas whereby to cause combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, recirculated gas is combustible), discloses a housing defining at least one chamber and having an opening for introducing the material into the said at least one chamber together with closure means for closing the said at least one chamber (2, 12, fig. 1), the housing also comprising means for extracting or displacing oxygen from the said at least one chamber so as to provide a substantially oxygen-depleted atmosphere in the said at least one chamber (14, fig. 1), means for irradiating the material in the said at least one chamber with electromagnetic radiation of sufficient power and for a sufficient time so as to cause degradation of the said material to a residue (fig. 2), means for admitting oxygen or air and at least one combustible gas into the presence of said residue (col. 2, lines 52-55), and means for ignition of the said combustible gas within the said at least one chamber so as to cause substantial combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, col. 3, lines 4-12). Tang discloses applicant's invention substantially as claimed with the exception of including the step of weighing the carbonaceous material to determine the energy level and or the time of irradiation, means for weighing the carbonaceous material prior to, or upon introduction of the said material into the said at least one chamber. Morhard et al teaches including the step of weighing the carbonaceous material to determine the energy level and or the time of irradiation, means for weighing the carbonaceous material prior to, or upon

introduction of the said material into the said at least one chamber for the purpose of regulating the quantity of pollutants released to the environment. It would have been obvious to one of ordinary skill in the art to modify Tang by including the step of weighing the carbonaceous material to determining the energy level and or the time of irradiation, means for weighing the carbonaceous material prior to, or upon introduction of the said material into the said at least one chamber as taught by Morhard et al for the purpose of regulating the quantity of pollutants released to the environment to meet regulatory requirements.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tang in view of Fujimori et al. Tang discloses a housing defining at least one chamber and having an opening for introducing the material into the said at least one chamber together with closure means for closing the said at least one chamber (2, 12, fig. 1), the housing also comprising means for extracting or displacing oxygen from the said at least one chamber so as to provide a substantially oxygen-depleted atmosphere in the said at least one chamber (14, fig. 1), means for irradiating the material in the said at least one chamber with electromagnetic radiation of sufficient power and for a sufficient time so as to cause degradation of the said material to a residue (fig. 2), means for admitting oxygen or air and at least one combustible gas into the presence of said residue (col. 2, lines 52-55), and means for ignition of the said combustible gas within the said at least one chamber so as to cause substantial combustion and reduce the residue from the irradiation step to a fine ash (36, fig. 1, col. 3, lines 4-12). Tang discloses applicant's invention substantially as claimed with the exception of the said at least one chamber is formed in a portable housing, said housing having means for connection to an external energy source. Joshi et al teaches the said at least one chamber is formed in a portable housing, said housing

having means for connection to an external energy source (30, fig. 1) for the purpose of providing increased utility of the apparatus or greater usage at a number of different locations. It would have been obvious to one of ordinary skill in the art to modify Tang by including the said at least one chamber is formed in a portable housing, said housing having means for connection to an external energy source as taught by Joshi et al for the purpose of providing increased utility of the apparatus or greater usage at a number of different locations, so that the apparatus will generate increased revenue or provide a larger market due to its mobility.

Allowable Subject Matter

Claims 21 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

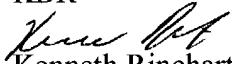
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of art with respect to apparatus in general: Suzuki et al (4937411), Kronenberger (4823711).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B Rinehart whose telephone number is 703-308-1722. The examiner can normally be reached on 7:30-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 703-308-1935. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KBR

Kenneth Rinehart
Patent Examiner
AU 3749